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REMARKS

Claims 1-19 were pending. Applicant has canceled claims 4 and 16, and amended claims 1, 10-12 and 18-19 to further define the invention. Accordingly, claims 1-3, 5-15 and 17-19 are now pending. In the Office Action, the Examiner rejected claims 10, 11, 18, and 19 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner also rejected claims 1-2, 4-5, 7, 11-13, 15, and 19 under 35 U.S.C. §102(b) as being anticipated by Jacobs (U.S. Patent No. 6,351,396) and claims 1-3, 5-7, and 12-15 under 35 U.S.C. §102(b) as being anticipated by Jacobs et al. (U.S. Patent No. 6,396,725). In addition, claims 8-10 and 16-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jacobs et al. in view of either Telefus et al. (U.S. Patent No. 6,304,473), Wilcox et al. (U.S. Patent No. 5,481,178) or Nebrigic et al. (U.S. Patent Publication No. 20030179550). Applicant respectfully requests reconsideration of the pending claims in view of the preceding amendments and the following remarks.

Claim Rejections Under 35 U.S.C. §112

The Examiner has rejected claims 10-11 and 18-19 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicant regards as the invention. Specifically, the Examiner rejects the use of "monitored temperatures are the same" and "average output currents are the same." In response, Applicant has amended claims 10-11 and 18-19 to clarify that the "temperatures in each module are the same" and the "currents in each module are the same." In light of these amendments, Applicant requests withdrawal of the rejection.

Claim Rejections Under 35 U.S.C. §102

The Examiner has rejected claims 1-8, 11-16 and 19 under 35 U.S.C. §102(b) as being anticipated by either U.S. Patent No. 6,351,396 to Jacobs ("the '396 patent") or U.S. Patent No. 6,396,725 to Jacobs et al. ("the '725 patent"). Applicant respectfully traverses these rejections.

Independent Claims 1 and 12

Independent claim 1, as amended, is directed to a device having a power source, a load and a power converter unit. The power converter unit includes "a processor and a plurality of converter modules, wherein the processor dynamically optimizes the power converter unit to maximize the efficiency of the transfer of energy from the power source to the load." Similarly, independent claim 12, as amended, is directed to a method that includes dynamically optimizing a power converter unit that includes "a processor and a plurality of converter modules." The method of claim 12 further includes "monitoring and comparing output power in view of an operating system power level to determine the number of modules to be activated to provide maximum efficiency." Applicant respectfully submits that none of the cited references disclose a power converter unit that includes "a plurality of converter modules," as required by independent claims 1 and 12, or a method that includes "monitoring and comparing output power in view of an operating system power level to determine the number of modules to be activated to provide maximum efficiency," as further required by claim 12.

The '396 Patent

The '396 patent discloses a method and apparatus for dynamically adjusting the operation of a converter device to improve conversion efficiency. *Jacobs*, abstract and col. 2, lines 53-57. The converter device in the '396 patent is clearly defined to include:

> [A]n inverter and a synchronous rectifier (or, at least two actively controlled switches). The converter device is driven by a plurality of drive signals having a duty cycle. The apparatus comprises: (a) a drive varying means for varying timing of selected individual drive signals of the plurality of drive signals; and (b) a measuring means for measuring, or observing, the duty cycle. The measuring or observing means is connected with the drive varying means. *Jacobs*, col. 3, lines 6-14.

The '396 patent further states that

> The method involves adjusting a controllable parameter and observing, or measuring the duty cycle of a conversion device. In its preferred embodiment, the method comprises the steps of: (a) varying timing of a first drive signal a first amount; (b) observing the duty cycle of the conversion device; (c) further varying the first drive signal appropriately to alter the duty cycle towards an extremum; and (d) continuing to operate the converter device with the duty cycle proximate the extremum. *Jacobs*, col. 2, lines 59-67.

In other words, the '396 patent, at most, discloses a single converter device wherein the timing of a plurality of drive signals are varied to dynamically alter the operation of the converter device to improve efficiency. Indeed, Applicant is unable to locate any part of the '396 patent that teaches or suggests a power converter unit that includes "a plurality of converter modules", as required by claims 1 and 12. Moreover, it follows that there is no teaching or suggestion to monitor and compare the output power of the converter device in view of an operating system power level "to determine the number of modules to be activated to provide maximum efficiency," as further required by claim 12. Accordingly, independent claims 1 and 12, and dependent claims 2-3, 5-11, 13-15 and 17-19, are allowable over the '396 patent and in condition for allowance.

The '725 Patent

The '725 patent discloses a system and method for improving the response of a control loop of a power supply. *Jacobs et al*, abstract. The power supply includes a DC-DC converter and a controller that includes a compensation circuit configured to "adaptively adjust the control

loop based on the characteristic or characteristics sensed by the sensing circuit 160 to improve the response of the control loop of the power supply 100." *emphasis added. Jacobs et al*, col. 5, lines 38-39 and 55-61. The sensing circuit monitors the output voltage across the load and determines the pertinent characteristic as a function of the output voltage or a change in the output voltage. *Jacobs et al*, col. 6, lines 22-26. In other words, the '725 patent teaches no more than a system and method for improving the response of a power supply by monitoring the output voltage of the load. There is simply no portion of the '725 patent that teaches or suggests a power converter unit that includes "a plurality of converter modules", as required by claims 1 and 12. Further, Applicant is unable to locate any portion of the '725 patent where the output power of the DC-DC converter is determined or monitored. Therefore, the '725 patent cannot possibly teach or suggest "monitoring and comparing the output power of the converter device in view of an operating system power level to determine the number of modules to be activated to provide maximum efficiency," as further required by claim 12.

Moreover, the '725 patent is directed to improving the response of the control loop of the power supply. Indeed, efficiency of the power converter is never even contemplated. Therefore, the '725 patent cannot possibly teach or suggest a processor that "dynamically optimizes the power converter unit to maximize the efficiency of the transfer of energy from the power source to the load," as further required by claim 1, or to "provide maximum efficiency," as further required by claim 12.

Accordingly, for any of the reasons set forth above, independent claims 1 and 12, and dependent claims 2-3, 5-11, 13-15 and 17-19, are allowable over the '725 patent and in condition for allowance.

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Claim Rejections Under 35 U.S.C. §103

Claims 8-10 and 16-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jacobs et al. in view of either Telefus et al. (U.S. Patent No. 6,304,473), Wilcox et al. (U.S. Patent No. 5,481,178) or Nebrigic et al. (U.S. Patent Publication No. 20030179550). As set forth above, the '396 and the '725 patents do not disclose all of the limitations as required by independent claims 1 and 12. The addition of Telefus, Wilcox or Nebrigic do not cure these deficiencies. Therefore, for at least this reason, claims 8-10 and 17-18, which depend from independent claims 1 and 12, are also in condition for allowance.

CONCLUSION

Reconsideration and allowance are respectfully requested. In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. DP-310126 (65899-0714) from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to such deposit account number.

Dated: January 3, 2007

Respectfully submitted,

By _____
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